



1645

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/917,384

DATE: 01/29/2002
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3 <110> APPLICANT: DING, SHI-YOU /
 4 ADNEY, WILLIAM S. /
 5 VINZANT, TODD B.
 6 DECKER, STEPHEN R.
 7 HIMMEL, MICHAEL E.
 9 <120> TITLE OF INVENTION: THERMAL TOLERANT CELLULASE FROM ACIDOTHERMUS
 10 CELLULOLYTICUS
 12 <130> FILE REFERENCE: 40170.6US01
 C--> 14 <140> CURRENT APPLICATION NUMBER: US/09/917,384
 15 <141> CURRENT FILING DATE: 2001-07-28
 17 <160> NUMBER OF SEQ ID NOS: 14
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 38 35 40 45
 40 His Pro Ala Ile Ala Ala Thr His Val Asp Asn Pro Tyr Ala Gly Ala
 41 50 55 60
 43 Thr Phe Phe Val Asn Pro Tyr Trp Ala Gln Glu Val Gln Ser Glu Ala
 44 65 70 75 80
 46 Ala Asn Gln Thr Asn Ala Thr Leu Ala Ala Lys Met Arg Val Val Ser
 47 85 90 95
 49 Thr Tyr Ser Thr Ala Val Trp Met Asp Arg Ile Ala Ala Ile Asn Gly
 50 100 105 110
 52 Val Asn Gly Gly Pro Gly Leu Thr Thr Tyr Leu Asp Ala Ala Leu Ser
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 58 Leu Pro Gly Arg Asp Cys Ala Ala Leu Ala Ser Asn Gly Glu Leu Pro
 59 145 150 155 160
 61 Ala Thr Ala Ala Gly Leu Gln Thr Tyr Glu Thr Gln Tyr Ile Asp Pro
 62 165 170 175
 64 Ile Ala Ser Ile Leu Ser Asn Pro Lys Tyr Ser Ser Leu Arg Ile Val

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67 Thr Ile Ile Glu Pro Asp Ser Leu Pro Asn Ala Val Thr Asn Met Ser
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70 Ile Gln Ala Cys Ala Thr Ala Val Pro Tyr Tyr Glu Gln Gly Ile Glu
71          210          215          220
73 Tyr Ala Leu Thr Lys Leu His Ala Ile Pro Asn Val Tyr Ile Tyr Met
74 225          230          235          240
76 Asp Ala Ala His Ser Gly Trp Leu Gly Trp Pro Asn Asn Ala Ser Gly
77          245          250          255
79 Tyr Val Gln Glu Val Gln Lys Val Leu Asn Ala Ser Ile Gly Val Asn
80          260          265          270
82 Gly Ile Asp Gly Phe Val Thr Asn Thr Ala Asn Tyr Thr Pro Leu Lys
83          275          280          285
85 Glu Pro Phe Met Thr Ala Thr Gln Gln Val Gly Gly Gln Pro Val Glu
86          290          295          300
88 Ser Ala Asn Phe Tyr Gln Trp Asn Pro Asp Ile Asp Glu Ala Asp Tyr
89 305          310          315          320
91 Ala Val Asp Leu Tyr Ser Arg Leu Val Ala Ala Gly Phe Pro Ser Ser
92          325          330          335
94 Ile Gly Met Leu Ile Asp Thr Leu Arg Asn Gly Trp Gly Gly Pro Asn
95          340          345          350
97 Glu Pro Thr Gly Pro Ser Thr Ala Thr Asp Val Asn Thr Phe Val Asn
98          355          360          365
100 Gln Ser Lys Ile Asp Leu Arg Gln His Arg Gly Leu Trp Cys Asn Gln
101          370          375          380
103 Asn Gly Ala Gly Leu Gly Gln Pro Pro Gln Ala Ser Pro Thr Asp Phe
104 385          390          395          400
106 Pro Asn Ala His Leu Asp Ala Tyr Val Trp Ile Lys Pro Pro Gly Glu
107          405          410          415
109 Ser Asp Gly Thr Ser Ala Ala Ser Asp Pro Thr Thr Gly Lys Lys Ser
110          420          425          430
112 Asp Pro Met Cys Asp Pro Thr Tyr Thr Thr Ser Tyr Gly Val Leu Thr
113          435          440          445
115 Asn Ala Leu Pro Asn Ser Pro Ile Ala Gly Gln Trp Phe Pro Ala Gln
116          450          455          460
118 Phe Asp Gln Leu Val Ala Asn Ala Arg Pro Ala Val Pro Thr Ser Thr
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121 Ser Ser Ser Pro Pro Pro Pro Pro Pro Ser Pro Ser Ala Ser Pro Ser
122          485          490          495
124 Pro Ser Pro Ser Pro Ser Pro Ser Ser Pro Ser Pro Ser Pro Ser
125          500          505          510
127 Pro Ser Ser Ser Pro Ser Pro Ser Pro Ser Pro Ser Pro Ser Pro Ser
128          515          520          525
130 Ser Ser Pro Ser Pro Ser Pro Ser Ser Ser Pro Ser Pro Ser Pro Ser
131          530          535          540
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134 545          550          555          560
136 Pro Ser Pro Ser Pro Ser Pro Ser Pro Ser Pro Ser Ser Ser Pro Ser
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143      595      600      605
145 Gln Leu Val Asn Thr Gly Ser Ser Val Asp Leu Ser Thr Val Thr
146      610      615      620
148 Val Arg Tyr Trp Phe Thr Arg Asp Gly Gly Ser Thr Leu Val Tyr
149 625      630      635      640
151 Asn Cys Asp Trp Ala Ala Met Gly Cys Gly Asn Ile Arg Ala Ser Phe
152      645      650      655
154 Gly Ser Val Asn Pro Ala Thr Pro Thr Ala Asp Thr Tyr Leu Gln Leu
155      660      665      670
157 Ser Phe Thr Gly Gly Thr Leu Ala Ala Gly Gly Ser Thr Gly Glu Ile
158      675      680      685
160 Gln Asn Arg Val Asn Lys Ser Asp Trp Ser Asn Phe Thr Glu Thr Asn
161      690      695      700
163 Asp Tyr Ser Tyr Gly Thr Asn Thr Thr Phe Gln Asp Trp Thr Lys Val
164 705      710      715      720
166 Thr Val Tyr Val Asn Gly Val Leu Val Trp Gly Thr Glu Pro Ser Gly
167      725      730      735
169 Thr Ser Pro Ser Pro Thr Pro Ser Pro Ser Pro Ser Pro Ser
170      740      745      750
172 Pro Gly Gly Asp Val Thr Pro Pro Ser Val Pro Thr Gly Leu Val Val
173      755      760      765
175 Thr Gly Val Ser Gly Ser Ser Val Ser Leu Ala Trp Asn Ala Ser Thr
176      770      775      780
178 Asp Asn Val Gly Val Ala His Tyr Asn Val Tyr Arg Asn Gly Val Leu
179 785      790      795      800
181 Val Gly Gln Pro Thr Val Thr Ser Phe Thr Asp Thr Gly Leu Ala Ala
182      805      810      815
184 Gly Thr Ala Tyr Thr Tyr Thr Val Ala Ala Val Asp Ala Ala Gly Asn
185      820      825      830
187 Thr Ser Ala Pro Ser Thr Pro Val Thr Ala Thr Thr Thr Ser Pro Ser
188      835      840      845
190 Pro Ser Pro Thr Pro Thr Gly Thr Thr Val Thr Asp Cys Thr Pro Gly
191      850      855      860
193 Pro Asn Gln Asn Gly Val Thr Ser Val Gln Gly Asp Glu Tyr Arg Val
194 865      870      875      880
196 Gln Thr Asn Glu Trp Asn Ser Ser Ala Gln Gln Cys Leu Thr Ile Asn
197      885      890      895
199 Thr Ala Thr Gly Ala Trp Thr Val Ser Thr Ala Asn Phe Ser Gly Gly
200      900      905      910
202 Thr Gly Gly Ala Pro Ala Thr Tyr Pro Ser Ile Tyr Lys Gly Cys His
203      915      920      925
205 Trp Gly Asn Cys Thr Thr Lys Asn Val Gly Met Pro Ile Gln Ile Ser
206      930      935      940
208 Gln Ile Gly Ser Ala Val Thr Ser Trp Ser Thr Thr Gln Val Ser Ser
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218          995          1000          1005
220 Val Ala Gly His Thr Trp Asn Val Trp Gln Gly Gln Gln Thr Ser Trp
221          1010          1015          1020
223 Lys Ile Ile Ser Tyr Val Leu Thr Pro Gly Ala Thr Ser Ile Ser Asn
224          1025          1030          1035          1040
226 Leu Asp Leu Lys Ala Ile Phe Ala Asp Ala Ala Ala Arg Gly Ser Leu
227          1045          1050          1055
229 Asn Thr Ser Asp Tyr Leu Leu Asp Val Glu Ala Gly Phe Glu Ile Trp
230          1060          1065          1070
232 Gln Gly Gly Gln Gly Leu Gly Ser Asn Ser Phe Ser Val Ser Val Thr
233          1075          1080          1085
235 Ser Gly Thr Ser Ser Pro Thr Pro Ser Pro Ser Pro Thr Pro Thr Pro
236          1090          1095          1100
238 Ser Pro Thr Pro Thr Pro Ser Pro Ser Pro Thr Pro Ser Pro Ser Pro
239          1105          1110          1115          1120
241 Thr Ser Ser Pro Ser Ser Ser Gly Val Ala Cys Arg Ala Thr Tyr Val
242          1125          1130          1135
244 Val Asn Ser Asp Trp Gly Ser Gly Phe Thr Ala Thr Val Thr Val Thr
245          1140          1145          1150
247 Asn Thr Gly Ser Arg Ala Thr Asn Gly Trp Thr Val Ala Trp Ser Phe
248          1155          1160          1165
250 Gly Gly Asn Gln Thr Val Thr Asn Tyr Trp Asn Thr Ala Leu Thr Gln
251          1170          1175          1180
253 Ser Gly Ala Ser Val Thr Ala Thr Asn Leu Ser Tyr Asn Asn Val Ile
254          1185          1190          1195          1200
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283 ccaaacgcgg tcaccaatat gagcattcaa gcgtgtgcaa cggcggtgcc gtattacgag 660
284 caaggcatcg agtacgcgtc cacgaaattg cacgccattc cgaacgtgta catctacatg 720
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